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EXAMINER

LEFLORE, LAUREL E

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,463

Applicant(s)

SIVERSSON, PER

Examiner

Laurel E LeFlore

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-13 and 15-19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5,7-13 and 15-19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 05 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 7-13, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Ketwich 6,072,475 in view of Kamada et al. 6,19,258 B1.

3. In regard to claim 1, van Ketwich discloses an invention similar to that which is claimed in claim 1 of the immediate application. See rejection of claim 1 in Paper No. 7, page 4, for similarities. Further, the touch surface of van Ketwich is arranged at an edge side of the apparatus, as illustrated in figures 11a-11b. Note that figures 11a and 11b depict three touch surfaces, each arranged on an edge side of an apparatus. Note that these edge sides on which touch surfaces are arranged are located on the front side but are distinct from the front side in that they protrude from the front side. Note also that the display unit of figures 11a and 11b are the predetermined cursor controls displayed on the touch surfaces. Further, as stated in Paper No. 7, figure 8a depicts a display with an adjacent touch surface, which is to be used in a system that is not depicted. Van Ketwich does not disclose that the display unit has a display area taking up a majority of the front side of the apparatus.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of van Ketwich by having the display and

touch surface arrangement of figure 8a be the front face of the not shown system for which it is disclosed (see column 9, lines 20-21). Such a placement of the display and touch surface arrangement would be a matter of routine design choice, and would allow a user of the device to view the display and operate the touch surface. Also, with such an arrangement, the apparatus would have a display area taking up a majority of the front side and a touch surface arranged on a side edge. Further, it is common and conventional to provide a handheld or pocket sized electronic apparatus with its front face being a display and touch surface.

Further, Kamada discloses an invention in which the display unit has a display area taking up a majority of the front side of the apparatus. This is depicted in figures 1A and 1B. Kamada teaches in column 1, lines 12-32, "A product has recently been commercialized in which the two devices are integrated, i.e., a mobile communication device in the form of a PHS telephone with a PDA capability... This type of mobile communication devices are available for a person at a place other than his or her home or office not only for simply as a telephone but also for transmitting/receiving e-mails and facsimiles, or accessing Internet WWW (world Wide Web) servers to browse home-pages. For this end, such mobile communication devices include a display of a larger screen size than that of conventional mobile telephones."

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of van Ketwich by having the display area take up most of the front side of the apparatus, as in the invention of Kamada. One would have been motivated to make such a change based on the teaching of Kamada

that such a larger display screen size is used in mobile communication devices “not only for simply as a telephone but also for transmitting/receiving e-mails and facsimiles, or accessing Internet WWW (world Wide Web) servers to browse home-pages”. Thus, such a larger display size adds extra functionality to the display of the mobile communication device. Further, such a selection of display size is a matter of design choice and a change in size is an obvious modification to an invention (In re Rose, 105 USPQ 237 (CCPA 1995)).

4. In regard to claim 2, van Ketwich discloses the above described apparatus, wherein the touch surface is longer in the second direction than in the first direction (see figure 2).

5. In regard to claim 3, van Ketwich discloses the above described apparatus, wherein the touch surface is single curved about a linear geometric axis (see column 3, lines 60-61) parallel with the second direction (see figure 2). Here it is inherently understood that a “U-shape” is single curved about a linear geometric axis.

6. In regard to claims 7 and 8, see figure 8a.

7. In regard to claim 9, van Ketwich discloses that the touch surface is divided in the second direction into at least two part-surfaces, as best understood. See figure 8a and column 9, lines 36-45, disclosing, “The system 1552...displays a number of icons 1550 on the display 1520...at a position adjacent to a predetermined region of the U-shaped touch screen 1511. On the activation of the touch screen 1511 by a ‘touch’ of a user on one of the predetermined regions, the function which corresponds to the icon adjacent

to the 'touched' predetermined region is executed by the system 1552." These predetermined regions are "part-surfaces", as best understood.

8. In regard to claim 10, see figures 11a and 11b.

9. In regard to claim 11, van Ketwich discloses the above described apparatus, wherein the touch surface is formed by an outer side of a resilient outer foil (see column 6, line 12) having two edges located parallel to said linear geometric axis (see figure 8a) and at which the resilient outer foil is clamped so that, as a direct result of its striving to assume a flat form, it is tensioned to a convexly single-curved, resilient surface (see column 7, lines 6-7). Here it is understood that the elastic nature of the bent conventional touch screen would result in the screen striving to assume a flat form, thereby being tensioned to a convexly single-curved, resilient surface.

10. In regard to claim 12, van Ketwich discloses the above described apparatus comprising a touch surface over which a user is to pass a finger, and means for sensing the position of the finger in said two directions on the touch surface (see column 4, lines 27-30). Also see rejections of claims 1 and 11. Further, it is inherent that the touch surface is clamped in some way, so that is affixed to the apparatus on which it is being used.

11. In regard to claim 13, see rejection of claim 2.

12. In regard to claim 15, van Ketwich discloses a curved inner foil arranged inside and spaced from the outer foil. See figure 1b and column 6, lines 1-27, disclosing a "substrate 1001 which has an insulating surface" and a "resilient insulating membrane 1002", among other layers of a conventional touch screen. These layers are an inner

foil arranged inside and spaced from an outer foil. Further see figure 2 and column 6, lines 49-50, disclosing they are curved, "The U-shape may be achieved by bending a conventional touch screen."

13. In regard to claim 18, van Ketwich discloses that the apparatus is a mobile telephone. See previous rejection of claim 1 on page 4 of Paper No. 7.

14. Claims 4, 5 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Ketwich 6,072,475 in view of Kamada et al. 6,19,258 B1 as applied to claim 1 above, and further in view of Armstrong 5,729,219.

15. In regard to claims 4, 5 and 19, van Ketwich in view of Kamada discloses an invention similar to that which is claimed in claims 4, 5 and 19. See rejection of claim 1 for similarities. Van Ketwich further discloses that the touch surface has two parallel longitudinal edges between which the curved touch surface runs. This is depicted in figures 2, 4, 8a, and 9-12b.

Van Ketwich in view of Kamada does not disclose that the longitudinal edges are united with the front side and rear side, respectively, of the apparatus or that the majority of the curved touch surface is arranged on the side edge of the apparatus and a minor part of the curved touch surface is arranged on the side edge of the apparatus.

Armstrong discloses an invention in which a display is positioned on the front side of an apparatus with a touch surface being positioned on the rear side. This is depicted in figures 5 and 6. Note that with this configuration, the display area utilizes almost all of the front side of the apparatus. Having the touch surface on opposite side

of the apparatus allows the user to use the touch surface from one direction while viewing the display from another, as shown in figures 5 and 6.

Moving the touch surface from the front side of an apparatus, as depicted in van Ketwich, would also allow the user to use the touch surface from different positions and allow the display to use the entire front face of the apparatus. Such concerns and solutions are common and conventional in the design of mobile apparatus incorporating displays and touch surfaces. Thus, placement of the touch surface is a matter of routine design choice, and placing the touch surface anywhere other than the front side, and particularly, the uniting of the longitudinal edges of the touch surface with the front and rear sides of the apparatus or the arrangement of the touch surface mostly on the side edge and partly on the front side, would be an obvious design choice. Further, the location of parts is often shifted in design choice and does not alter the operation of the invention (In re Japikse, 86 USPQ 70 (CCPA 1950)).

16. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ketwich 6,072,475 in view of Kamada et al. 6,19,258 B1 as applied to claims 12 and 15 above, and further in view of Zenk 4,066,853.

17. In regard to claims 16 and 17, van Ketwich in view of Kamada disclose an invention similar to that which is disclosed in claims 16 and 17. See rejections of claims 12 and 15 for similarities. Van Ketwich in view of Kamada does not disclose that the outer foil has greater curvature than the inner foil or that the outer foil has greater extension in its transverse direction than the inner foil, so that it is brought into a relative

distance from the inner foil when the foils are clamped to the convex form along their opposite longitudinal edges.

Zenk discloses an invention with such a configuration of outer and inner foils, depicted in the figures as substrate 10 and membrane 11. See column 4, lines 3-5, disclosing, "If substrate 10 is curved it is preferable that the curvature of membrane 11 when unstressed be slightly greater than that of substrate 10." Zenk further teaches in column 4, lines 11-12, "the slightly greater curvature prevents strips 12-16 on membrane 11 from being drawn down tightly onto strips 20-24 and possibly shorting them." Note in lines 33-36 of column 4 that the strips are conductive strips for making a contact point upon application of pressure to the touch surface.

Zenk further discloses in column 4, lines 16-22, "Membrane 11 is securely fastened around its periphery to substrate 10 by tape strips 54 in such a position that conductive strips 12-16 pass across each of conductive strips 20-24 and are spaced therefrom by grid 45 and the natural tendency of membrane 11 to assume its molded-in spherical shape when unstressed." Note in figure 2 that the outer foil has a greater extension in its traverse direction than the inner foil.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of van Ketwich in view of Kamada by having the outer foil have greater curvature than the inner foil or the outer foil have greater extension in its transverse direction than the inner foil, so that it is brought into a relative distance from the inner foil when the foils are clamped to the convex form along their opposite longitudinal edges, as in the invention of Zenk. One would have been

motivated to make such a change in order to have a curved touch surface that is functional in that "a contact...can be made by gentle finger or stylus pressure" (see column 4, lines 33-35) and the inner and outer foils do not short, as taught be Zenk.

Response to Arguments

18. Applicant's arguments filed 30 August 2004 have been fully considered but they are not persuasive.

19. Applicant argues on page 6 that "an edge side by being a distinct side of the apparatus is not to be mistaken for a side edge of the front side of the apparatus". However, the edge sides of van Ketwich, while being located on the front side of the apparatus, are also distinct from the front side of the apparatus. That is, they protrude from the front side.

20. Applicant argues on page 7, in regard to claim 12, that "no disclosure has been found that teaches or even suggests a touch surface that is formed by an outer side of a resilient outer foil having two edges located parallel to the linear geometric axis and at which the resilient outer foil is clamped so that, as a direct result of its striving to assume a flat form, it is tensioned to a convexly single-curved, resilient surface. However, as stated in the rejection of claim 11 above (and referenced in the rejection of claim 12), see column 7, lines 6-7 of van Ketwich, in which it is disclosed that "The U-shape may be achieved by bending a conventional touch screen." Here it is understood that the elastic nature of the bent conventional touch screen would result in the screen striving to assume a flat form, thereby being tensioned to a convexly single-curved, resilient surface.

21. In regard to applicant's arguments on page 8, Armstrong discloses an invention in which a display is positioned on the front side of an apparatus with a touch surface being positioned on the rear side. Note that with this configuration, the display area utilizes almost all of the front side of the apparatus. Thus, Armstrong teaches a repositioning of a touch surface which maximizes display area on the front surface of an apparatus. Armstrong thus also teaches having the touch surface on opposite side of the apparatus, which allows the user to use the touch surface from one direction while viewing the display from another.

Moving the touch surface from the front side of an apparatus, as depicted in van Ketwich, would also allow the user to use the touch surface from different positions and allow the display to use the entire front face of the apparatus. Such concerns and solutions are common and conventional in the design of mobile apparatus incorporating displays and touch surfaces, as can be seen in the invention of Armstrong. Thus, placement of the touch surface is a matter of routine design choice, and placing the touch surface anywhere other than the front side, and particularly, the uniting of the longitudinal edges of the touch surface with the front and rear sides of the apparatus or the arrangement of the touch surface mostly on the side edge and partly on the front side, would be an obvious design choice. Further, the location of parts is often shifted in design choice and does not alter the operation of the invention (In re Japikse, 86 USPQ 70 (CCPA 1950)).

22. In response to applicant's arguments on pages 8-9 (in regard to claims 15-17) against the references individually, one cannot show nonobviousness by attacking

references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yasutake 5,729,249 discloses an invention in which touch surfaces are arranged on all side of an apparatus.

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laurel E LeFlore whose telephone number is (703) 305-8627. The examiner can normally be reached on Monday-Friday 8-4:30.


Art Unit: 2673

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LEL

LEL
6 December 2004


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SUPERVISORY PATENT EXAMINER
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